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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/863,487	05/23/2001	Jens Wildhagen	450117-03309	9332
20999	7590	05/08/2006	EXAMINER	
FROMMER LAWRENCE & HAUG 745 FIFTH AVENUE- 10TH FL. NEW YORK, NY 10151				DEPPE, BETSY LEE
			ART UNIT	PAPER NUMBER
			2611	

DATE MAILED: 05/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/863,487	WILDHAGEN, JENS
Examiner	Art Unit	
Betsy L. Deppe	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 21 November 2005 and 28 February 2006.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-10 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) 1 and 8-10 is/are allowed.

6) Claim(s) 3-6 is/are rejected.

7) Claim(s) 2-7 is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 21 November 2005 is/are: a) accepted or b) objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed November 21, 2005 and February 28, 2006 have been fully considered but they are not persuasive with regard to the rejections of claims 3-6 under 35 USC 112, 1st paragraph.
2. In response to the applicant's argument that page 13, line 26 - page 14, line 9 describes the limitations for claims 5 and 6 (see page 12 of the November 21, 2005 response), the Examiner agrees that the multiplier comprising registers, adders and subtracters is described. However, claims 5 and 6 recite that "each of said at least multiplier" (see line 1) is comprised of the registers, adders and subtracters. According to page 13, line 30, it appears that the recited limitations corresponding to Figure 9 are used to replace both multiplier 5 (i.e. "first multiplier") and multiplier 9 (i.e. "second multiplier") in Figure 8. There is no description of which register, adder and/or subtracter corresponds to which multiplier. Therefore, the rejection is not withdrawn.
3. In the February 28, 2006 response regarding the rejection of claims 3 and 4 under 35 USC 112, 1st paragraph, the applicant cites page 6, line 36 - page 11, line 5 as describing a polyphase filter will the allpass filter from claim 1 and separate limitations from claim 3 and 4. (See page 8 of the response) While page 7, lines 19-30 describes the polyphase filter as comprised of the limitations in claims 3 and 4 and page 6, lines 6 -15 refers to a polyphase filter with an allpass filter and Figure 2b as showing the structure of the allpass filter recited in claim 1, the Examiner cannot find where it "clearly

describes" the combination of limitations in claim 1 with claims 3 and 4. Based on the Examiner's understanding, the limitations recited in claims 3 and 4 comprise the allpass filter recited in claim 1. Therefore, the rejection is maintained.

4. Applicant's arguments, see pages 14-15 of the November 21, 2005 response and page 9 of the February 28, 2006 response with respect to claim 1 have been fully considered and are persuasive. The rejection of claims 1-7 under 35 U.S.C. 102(a) and/or 35 U.S.C. 103(a) has been withdrawn.

Drawings

5. The drawings were received on November 21, 2005. These drawings are accepted.

Claim Objections

6. Claims 2-7 are objected to because of the following informalities: on line 1 of the respective claims, "The filter" should be "The polyphase filter" for clarification. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Art Unit: 2611

8. Claims 3-6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

9. With regard to claims 3 and 4, the specification does not describe a polyphase filter comprising an allpass filter (see claim 1, line 4) in combination with the limitations recited in claims 3 and 4, respectively. Based on the Examiner's understanding of the detailed description, allpass filter is the polyphase filter and the limitations in claims 3 and 4 comprise the allpass/polyphase filter. Therefore, the specification does not describe how to make and/or use a polyphase filter with the recited allpass filter in claim 1 and the separate additional limitations in claims 3 and 4.

To overcome this rejection, the Examiner suggests changing "further comprising" in claim 3, lines 1-2 to "wherein the structure of the allpass filter comprises" and changing "further comprising" in claim 4, lines 1-2 to "wherein the structure of the allpass filter further comprises."

10. With regard to claims 5 and 6, the specification does not describe "each of said at least one multiplier" (*emphasis added*) comprising the recited limitations in the respective claims. However, the description of Figure 9 on page 13, lines 30-32 indicates that the configuration of the shift registers, adders and subtracters are used to replace both multipliers 5 and 9. Therefore, it is unclear how to make and/or use the claimed invention of each multiplier having a corresponding set of shift registers, adders and subtracters, as recited in claims 5 and 6.

Allowable Subject Matter

11. Claims 1, 2 and 7-10 are allowed.

12. The following is an examiner's statement of reasons for allowance: prior art of record does not teach or suggests in combination a polyphase filter with limitations as recited in claim 1, lines 4-10. Furthermore, prior art of record does not teach or suggests in combination an IQ-generator comprising a multiplier and polyphase filter as recited in claim 8.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

13. Please note that this application is now assigned to Art Unit 2611.

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betsy L. Deppe whose telephone number is (571) 272-3054. The examiner can normally be reached on Monday, Tuesday and Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Betsy L. Deppe
Primary Examiner
Art Unit 2611